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Claims

1. A method for producing a sound-insulating composite component, in particular for motor vehicles, in which method the composite component (38, 38') comprises a heavy layer (6, 6') and a sound attenuation layer (17, 17') connected with said heavy layer (6, 6') and is made of a porous and/or textile material, comprising the steps of:

   - placing a certain volume of a heavy-layer material as a plasticized compound (5) into an open cavity (3, 3') of a press comprising a lower die (1, 2) and an upper die (40, 41);

   - closing the press, wherein the plasticized compound (5) is extrusion-pressed into the form of the heavy layer (6, 6') in the cavity defined by the lower die and the upper die;

   - opening the press;

   - arranging the sound attenuation layer (17, 17') in the form of a web, a blank or an injection moulded part on the heavy layer (6, 6'); and

   - partial welding together of the heavy layer (6, 6') and the sound attenuation layer (17, 17') by closing the press or a further press and by

activating several welding elements that are delimited in area and that are integrated in the press or in the further press.

2. The method according to claim 1, characterised in that the sound attenuation layer (17, 17') is given a profile structure in that it is thermally formed.

3. The method according to claim 1 or 2, characterised in that the heavy layer (6, 6') and the sound attenuation layer (17, 17') are interconnected in such a way that the heavy layer (6, 6') adjoins the sound attenuation layer (17, 17') parallel to its contours and without any gap.

4. The method according to any one of claims 1 to 3, characterised in that the heavy layer (6, 6') is designed such that it comprises regions of different thickness and/or density.

5. The method according to any one of claims 1 to 4, characterised in that the sound attenuation layer (17, 17') is formed of a flexible open-pore layer of foam material.

6. The method according to any one of claims 1 to 5, characterised in that the sound attenuation layer (17, 17') is made from PUR foam material of the polyether type.

7. The method according to any one of claims 1 to 6,

characterised in that
the sound attenuation layer (17, 17') is made from a nonwovem-fabric-coated foam material layer.

8. The method according to any one of claims 1 to 7, characterised in that
the sound attenuation layer (17, 17') is designed such that it comprises regions of different compression.

9. The method according to any one of claims 1 to 8, characterised in that
the sound attenuation layer (17, 17') is designed such that it comprises regions of different thickness and/or density.

10. The method according to any one of claims 1 to 9, characterised in that
the sound attenuation layer (17, 17') is made from a foam material that has a compression hardness σ_{d40} of no less than 4 kPa and a permanent set ranging from 3 to 6 %, having previously been compressed by 50% and stored for 72 hours at 70°C.

11. The method according to any one of claims 1 to 10, characterised in that
for partial welding together of the heavy layer (6, 6') and the sound attenuation layer (17, 17') the lower die (1) and/or the upper die (2) are exchanged for the lower die (18) or the upper die (29) respectively, which results in an enlargement of the cavity defined by the lower die (1) and the upper die (2).

12. The method of claim 11,
characterised in that
the enlargement of the cavity takes place at the margin of the heavy layer (6) and/or in the region of an opening (25) in the heavy layer (6).

13. A sound-insulating composite component, in particular for motor vehicles, comprising a heavy layer (6) and a sound-attenuation layer (17) that is connected with said heavy layer (6) and is made of porous and/or textile material,
characterised in that
the heavy layer (6) is formed as a moulded part by extrusion-pressing a plasticized plastic compound (5), fed-in in the strand placement process, from the group of thermoplastic elastomers, comprises regions of different thickness and/or density and is welded to the sound attenuation layer (17) only in some parts, wherein the sound attenuation layer has a profile structure that is formed by thermal forming, and at least in some sections the circumference of the sound attenuation layer (17) reaches beyond the circumference of the heavy layer (6).

14. The composite component of claim 13,
characterised in that the heavy layer (6) adjoins the sound attenuation layer (17) parallel to its contours and without any gap.

15. The composite component according to claim 13 or 14,

characterised in that the sound attenuation layer (17) is made from a flexible open-pore layer of foam material.

16. The composite component according to any one of claims 13 to 15,
characterised in that the sound attenuation layer (17) is made from PUR foam material of the polyether type.

17. The composite component according to any one of claims 13 to 16,
characterised in that the sound attenuation layer (17) is made from a nonwoven-fabric-coated foam material layer.

18. The composite component according to any one of claims 13 to 17,
characterised in that the sound attenuation layer (17) comprises regions of different compression.

19. The composite component according to any one of claims 13 to 18,
characterised in that
the sound attenuation layer (17) is made of a foam material that has a compression hardness σ_{d40} of no less than 4 kPa and a permanent set ranging from 3 to 6 %, having previously been compressed by 50% and stored for 72 hours at 70°C.

20. The composite component according to any one of claims 13 to 19,

characterised in that the heavy layer (6) and the sound attenuation layer (17) each comprise at least one opening (25, 28), wherein the two openings (25, 28) form a joint opening, and the diameter of the opening (28) in the sound attenuation layer (17) is smaller than the diameter of the opening (25) in the heavy layer (6).